



CARDIAC ARREST -PEDIATRIC (Less than 15 years of age)

FIELD ASSESSMENT/TREATMENT INDICATORS

Cardiac arrest in a non-traumatic setting. Consider the potential causes of arrest for age.

BLS INTERVENTIONS

1. Assess patient, maintain appropriate airway, begin CPR according to current AHA Guidelines.
 - a. Ventilate at rate of 12 to 20 per minute. Ventilatory rate will decrease as patient age increases. Ventilatory volumes shall be the minimum necessary to cause chest rise.
 - b. Compression rate shall be a minimum of 100 per minute.
2. If patient one (1) year of age or older, utilize AED per Protocol Reference #10130 AED.

ALS INTERVENTIONS

1. Initiate CPR while applying the cardiac monitor.
2. Determine the cardiac rhythm and defibrillate at 2J/kg (or manufacturer's recommended equivalent) if indicated. Begin a two (2) minute cycle of CPR.
3. Obtain IO/IV access (IO is preferred).
4. Establish advanced airway when resources are available, with minimal interruption to CPR. After advanced airway established, insert NG/OG tube. Continue CPR with compressions at a minimum of 100/min without pauses during ventilations. Ventilations should be given at a rate of one (1) breath every six (6) to eight (8) seconds.
5. Utilize continuous quantitative waveform capnography, if available, for confirmation and monitoring of endotracheal tube placement and for assessment of ROSC.

Ventricular Fibrillation/Pulseless Ventricular Tachycardia

1. Initial defibrillation is administered at 2j/kg (or manufacturer's recommended equivalent). Second defibrillation is administered at 4J/kg. Third and subsequent defibrillation attempts should be administered at 10J/kg.
2. Perform CPR for two (2) minutes after each defibrillation, without delaying to assess the post-defibrillation rhythm.
3. Administer Epinephrine (1:10,000) during each two (2) minute cycle of CPR after each defibrillation unless capnography indicates possible ROSC.
 - a. 1 day to 8 years: 0.01mg/kg IO/IV (do not exceed adult dosage).
 - b. 9 to 14 years: 1.0mg IV/IO.
4. Reassess rhythm after each two (2) minute cycle of CPR. If VF/VT persists, defibrillate as indicated above.
5. After two (2) cycles of CPR, consider administering Lidocaine;
 - a. 1 day to 8 years: 1mg/kg IO/IV.
 - b. 9 to 14 years: 1mg/kg IV/IO.
6. May repeat Lidocaine at 0.5mg/kg after five (5) minutes up to total of 3.0 mg/kg.
7. If patient remains in pulseless VF/VT after five (5) cycles of CPR, consult base station.

Pulseless Electrical Activity/Asystole

1. Assess for reversible causes and initiate treatment.
2. Continue CPR with evaluation of rhythm every two (2) minutes.
3. Administer initial fluid bolus of 20 ml/kg for all ages, may repeat at:
 - a. 1 day to 8 years: 20 ml/kg.
 - b. 9 to 14 years: 300 ml.

4. Administer Epinephrine (1:10,000) during each two (2) minute cycle of CPR after each rhythm evaluation.
 - a. 1 day to 8 years: 0.01mg/kg IO/IV.
 - b. 9 to 14 years: 1.0mg IV/IO.

Utilize the following treatment modalities while managing the pediatric cardiac arrest patient:

Whenever possible, provide family members with the option of being present during the resuscitation of an infant or a child. For any termination of efforts, base station contact is required.

1. Insert NG/OG Tube to relieve gastric distention if the patient has been intubated with an advanced airway, per Protocol Reference #10080.
2. For continued signs of inadequate tissue perfusion, administer fluid bolus., Reassess after each bolus. May repeat twice for continued signs of inadequate tissue perfusion. In RCF, may give two (2) additional fluid boluses if indicated.
 - a. 1 day to 8 years: 20 ml/kg NS
 - b. 9 to 14 years: 300 ml NS
3. Obtain blood glucose. If indicated administer Dextrose according to Protocol Reference #14050 Pediatric Altered Level of Consciousness.
4. Naloxone for suspected opiate overdose; may repeat once as clinically indicated.
 - a. 1 day to 8 years: 0.1 mg/kg IO/IV. Do not exceed adult dosage.
 - b. 9 to 14 years: 2mg IV/IO.
5. If ROSC is achieved, obtain a 12 Lead ECG.
6. Utilize continuous waveform capnography, if available, to identify loss of circulation.
7. For continued signs of inadequate tissue perfusion **after** successful resuscitation;
 - a. 1 day to 8 years: Epinephrine (1:10,000) 0.5 mcg/kg/min IO/IV push

- b. 9 to 14 years: Dopamine 400mg in 250ml of NS to infuse at 5-20 mcg/kg/min IV titrated to maintain signs of adequate tissue perfusion.
- 8. Base station physician may order additional medications or interventions as indicated by patient condition.